26. *Additions to the Collection of Oriental Snakes in the Indian Museum, Part 3.* (With 3 figures).—*By* N. Annandale, B.A., D.Sc., *Deputy Superintendent of the Indian Museum.*

The present communication deals with a miscellaneous assemblage of specimens, and completes for the present my notes on recent additions to the collection, all the Oriental species having now being worked out and arranged[1]. Four new species and a new genus are described below, two of the former coming from the Malay Archipelago, one from N. E. India, and one from Gilgit. Considering the number of individuals examined, this does not represent a large percentage of novelties; and although new forms will certainly continue to be discovered from time to time in the remoter districts of the Indian Empire, it is clear that we now have a good general knowledge of the systematic ophiology of the country. The addition of a second species of *Helicops* to the fauna of Asia is interesting, while one of the new Malaysian forms is a good example of superficial resemblance, if not of "Mimicry." A new *Typhlops* and a new *Ablabes* have no particular importance, but must be recorded in order to complete the list.

In regard to doubtful specimens, I have made it a practice to dissect out the jaws on one side. This seems to me to be the only way in which it is possible to ensure a satisfactory view of the dentition. The operation can be performed without materially damaging the specimen externally, and if the bones are preserved in a small tube stoppered with cotton wool in the bottle in which the specimen is kept, they are available for future study.

TYPHLOPIDÆ.

Typhlops mulleri.*

A specimen from the Malay Archipelago is mottled on the dorsal surface of the posterior part of the body with dull yellow, the remainder of the back and sides being brown instead of black; but the latter peculiarity may be due to imperfect preservation.

Typhlops kapaladua,* sp. nov.

Diagnosis.—Habit stout; length about 27 times diameter of body; tail much broader than long, ending in a spine; snout obtuse, the sides rounded, moderately projecting. Rostral between $\frac{1}{3}$ and $\frac{1}{2}$ as broad as head, reaching the level of the eyes behind, separating the nasals completely. Nostril lateral, almost visible from above, with a single large subcircular pit embracing the nasal cleft beneath it; nasal completely divided, the cleft starting from the

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[1] Since this sentence was written I have obtained some further additions to the collection in the desert tract of S.E. India. They will be described in a later communication to the Society. September 16, 1905.

second labial, not reaching the upper surface of the head. Supraoculars large, frontal and parietal feebly developed. A præocular; no subocular; the former larger than the ocular, in contact with the second and third labials; eye barely distinguishable. Twenty-six scales round body. *Coloration*—Upper surface olive-brown, each scale paler at the edge; upper head scales broadly edged with yellow, a yellow ⊓ on the snout and a wedge-shaped mark of the same colour behind each eye; lower half of the rostral and labials and the whole of the lower surface, yellow.

Total Length.—280 mm.

A single specimen from the Malay Archipelago, probably from Java.

Typhlops acutus.

This species appears to be commoner than any other in Calcutta. It is sometimes found in native houses. I have lately had an opportunity of observing living specimens. When placed in a vessel with earth at the bottom they burrowed very rapidly, provided that the earth was not too hard, forcing their way down by muscular action of the anterior part of the body and making a passage no broader than their own diameter. I failed to see them feed, but have reason to think that they eat the earthworms with which they were supplied, at night. When taken in the hand they coiled round one of the fingers and pressed the tip or side of their hooked and pointed snout against the skin. They could do no injury in this way to the human skin, but seemed rather to be attempting to get a grip. Probably this peculiar modification may be useful in restraining captured worms and it is worthy of note that the caudal spine present in a larger number of the Typhlopidæ is absent both in this form and in several exotic species in which a beak is developed.

GLAUCONIIDÆ.

Glauconia blanfordii.

G. blanfordii, *Alcock and Finn, J.A.S.B.*, 1896, (2), p. 561.

In addition to the specimens recorded by Messrs. Alcock and Finn, we have received during the last few years others from Quetta (*Major G. C. Nurse*); Khotri, Sind (*Bombay Nat. Hist. Soc.*), and Bushire, Persia (*Karachi Mus.*). The relative diameter of the body varies considerably, but the number of the scales round it appears to be constant. Well preserved specimens have the upper scales feebly edged with pale-brown.

COLUBRIDÆ.

Calamaria leucocephala.*

Two specimens from the Malay Archipelago, one from Java.

Dryocalamus tristrigatus.*

A small specimen of this rare snake from the Malay Archipelago.

Tropidonotus khasiensis.*

A specimen, probably from Burma, obtained by one of the Museum collectors.

Macropisthodon himalayanus.

Tropidonotus himalayanus, *Boulenger, Faun. Ind., Rept.*, p. 347.

Dissection of the jaws of a specimen lately received from Sureil, Darjeeling, (*Major A. Alcock*) shows that this species belongs to the genus *Macropisthodon*. Fourteen small teeth are followed in the maxillary, after an interspace, by two large, backward-directed fangs. In *T. subminiatus*, the condition is somewhat similar, but the interspace is not so clearly marked. Evidently the separation between the two genera is not a natural one, but the great number of forms included in *Tropidonotus*, in which I would propose to leave *subminiatus*, makes it convenient.

Coluber radiatus.

A specimen from Cuttack, Orissa, (*R. T. Crighton*). I am not aware that the species has hitherto been recorded from this part of India. The late Prof. J. Wood-Mason corresponded with the donor about the specimen, which has been in the Museum for many years; but it appears to have been mislaid at the time when Mr. W. L. Sclater was compiling his *List of Snakes*.

Ablabes baliodirus.*

Specimens from Java and the Malay Archipelago.

Ablabes gilgiticus,* sp. nov.

Diagnosis.—Habit slender; head small; tail short, ending in a well developed spine.[1] Rostral deeper than broad, visible from above; nasal divided; eye half as long as snout; præfrontal undivided, its length much greater than that of the sutures between the internasals; frontal as long as its distance from the snout, much shorter than the parietals; one præ-and one postocular; loreal large, much longer than deep; temporals 1+2; 7 upper labials, third and fourth entering eye; 4 lower labials in contact with the anterior chin shield, which is larger than the posterior. Scales smooth, in 15 rows; ventrals 158; anal entire; caudals 34. *Coloration*—Back and sides dark brown, each scale edged, spotted

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[1] A similar spine occurs in other members of the genus, notably *A. rappii* but is not so large in any Indian form as in the new species.

or blotched with pale yellow ; ventral surface paler brown ; a broad yellow collar ; nape, labials, chin and throat, yellow.

Dimensions—

Total Length	...	...	125 mm.
Length of Tail	...	...	18 ,,

A single specimen from Gilgit, collected and presented by Capt. McMahon.

This species may be distinguished from any other Indian *Ablabes* by its extremely short tail. It has much the facies of a *Calamaria*.

Helicops indicus,* sp. nov.

Head flat, rather viperine ; snout obtuse ; canthus rostralis well marked. Eye not more than half the length of the frontal ; pupil very small. Rostral much broader than deep, well visible from

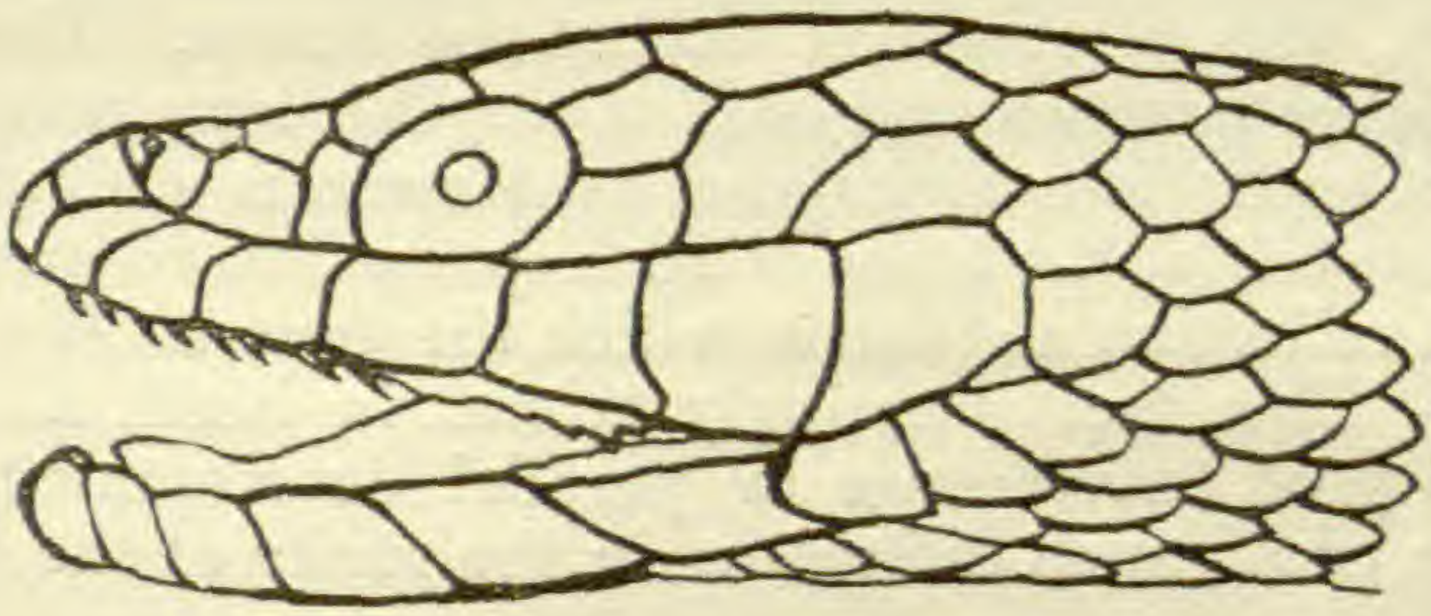

Fig. 1.

Helicops indicus.

above, separated from the internasal, which is undivided ; frontal more than twice as long as broad, obtusely truncated in front, sharply pointed behind, slightly longer than its distance from snout and than the parietals ; loreal deeper than long ; one præocular, two postoculars ; temporals 1+2 ; 7 upper labials, the fourth entering eye ; three lower labials in contact with the anterior chin shield, which is shorter than the posterior. Scales smooth, in 21 rows ; ventrals 161 ; anal entire ; sub-caudals 72. *Coloration*—dark brown above ; on each side of the dorsal surface a pale line originates at the posterior border of the parietal and runs along the body and tail. Ventral surface dull yellow reticulated more or less distinctly with dark brown ; a dark spot in the centre of each ventral shield. Labials dull yellow marbled with dark brown.

Dimensions—

Total Length	...	...	200 mm.
Length of Tail	...	...	40 ,,

Localities—

Monghyr, Bengal, and Rampore Tea Estate, N. Cachar. Two specimens, both purchased.

H. indicus may be distinguished from *H. schistosus*, the only other Asiatic species, by its viper-like head, small eye and smooth scales. As possibly the type specimens are immature, the coloration may be more uniform in the adult than that described.

The following is a "Key" for the two Indian species :—

1. Diameter of the eye more than half the length of the frontal. Scales keeled, in 19 rows ... ... *schistosus.*
2. Diameter of the eye not more than half the length of the frontal.
   Scales smooth, in 21 rows; nasals in contact behind the rostral ... ... *indicus.*

The distribution of the genus *Helicops* is very interesting Species occur in Tropical Africa; in S. and E. India, Burma, Ceylon, Malaya and Yunnan; in Florida, Central America, the West Indies, and S. America east of the Andes. The similarity between this distribution and that of the Cæcilian genus *Herpele*,[1] which has recently been elucidated by Alcock, is striking. I may point out that one of the types of *Helicops indicus* is from the same locality and collection as that in which the type of *Herpele fulleri* was found. This fact, seemingly trivial in itself, illustrates the improbability of convergence or parallel development being the explanation of all such difficulties in the study of the distribution

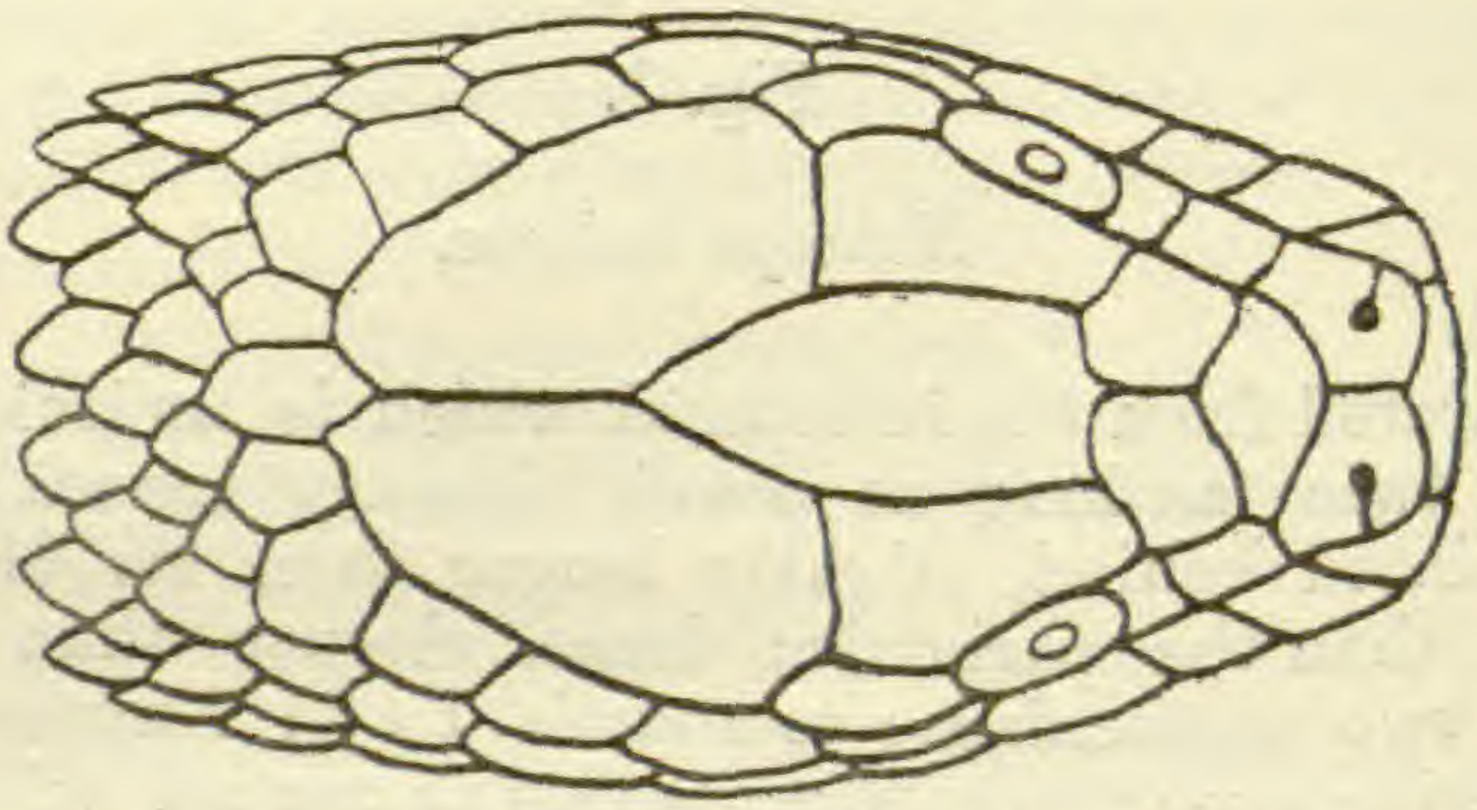

Fig. 2.

Helicops indicus.

of animals; for both *Helicops* and *Herpele* are well defined and apparently natural genera, having no peculiarity in common with one another superficially or anatomically.

DIPSADOIDES, gen. nov.

Family Colubridæ; *sub-family* Dipsadomorphinæ.
Head distinct from body; eye large, with circular pupil; body

[1] *Ann. Mag. N. H.* (xix), 1904, p. 267.

strongly compressed, with dorsal row of scales enlarged throughout, scales in rows of uneven numbers (19 in type), with apical pits; caudals divided. Palate toothed; solid maxillary teeth few (6 in type), subequal, followed, after a short interspace, by a pair of moderately sized, almost vertical grooved fangs; mandibular teeth subequal.

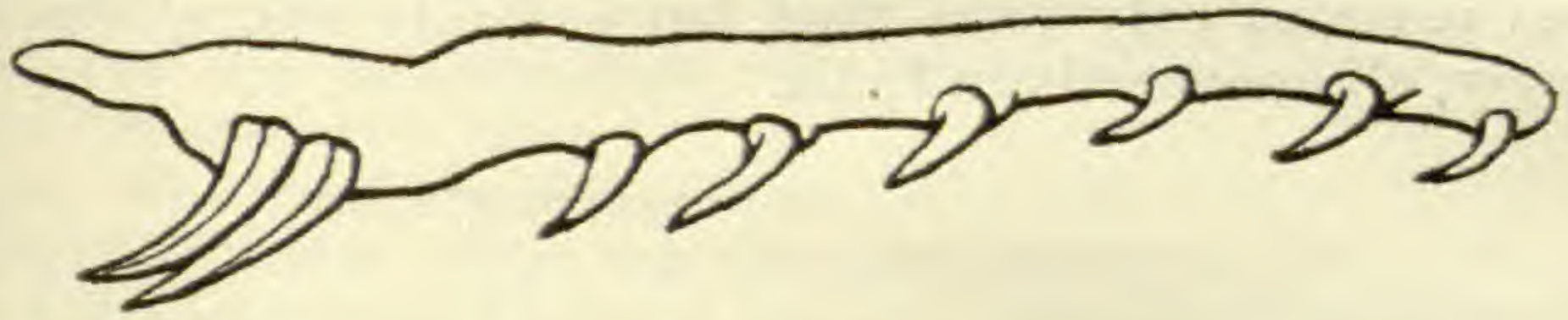

Fig. 3.

Right maxillary of *Dipsadoides decipiens.*

DIPSADOIDES DECIPIENS,* sp. nov.

Head small, flattened, very distinct from neck; snout short, obtusely rounded; eye prominent, nearly as long as snout; nostril large, directed backwards, in undivided nostril. Tail slender, tapering. Rostral broader than deep, just visible from above. Internasals larger than præfrontals; frontal longer than broad, as long as its distance from snout, slightly shorter than parietals; a large præocular and a small postocular; supraocular very large; loreal deeper than long; temporals 2+2; eight upper labials, the third, fourth and fifth entering the eye; two large subequal chin shields, the anterior in contact with four labials, both in contact with their neighbours. Body scales narrow, leaf-shaped, slightly oblique on neck, strongly imbricate; in 19 rows; the dorsal row enlarged throughout, broader than long. Ventrals rounded at the edge, keeled at either side, 258 in number; anal entire; caudals 152. *Coloration*—dorsal surface and sides pale brown profusely spotted and marbled with dark brown and, less profusely, with dull yellow; a large number of irregular dark bars on the dorsal surface. Ventral surface dull yellow marbled posteriorly with dark brown; chin and throat spotted with dark brown.

Dimensions—

Total Length	...	...	900 mm.
Length of Tail	...	...	265 „

Habitat. Malay Archipelago. A single specimen.

This remarkable snake was confused at first sight with some specimens of *Dipsadomorphus cynodon* in the same collection to which it bore a close external resemblance. It is one of the many interesting species received from the Royal Natural History Society of Batavia.

BUNGARUS SINDANUS*, Blgr.

B. sindanus, *Boulenger, Journ. Bombay N. H. Soc.* XI, 1897-1898, p. 73, pl.

A specimen $64\frac{1}{2}$ inches long has lately been sent to the Museum from the Zoological Garden, Alipore. The Superintendent of the Gardens tells me that it was captured at Midnapore, Lower Bengal, by a reliable collector and arrived at the Gardens early in 1896. It must, therefore, have lived in captivity for nine years. The Giant Krait, as this species may be called, has hitherto been recorded only from Sind, but probably occurs, somewhat sparingly, all over northern India.